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Goat-parasite interactions: from knowledge to control

Heidi Ekmekci



3rd CAPARA WGs Workshop & MC Meeting

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Anthelmintic resistance in Danish goats – an example from a large dairy herd

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Resistance against one or more of the broad spectrum anthelmintics was first described in Danish goats in 1996 in 12 of 15 surveyed herds. Since then the development of resistance has not been surveyed properly, but unpublished data from 2008 demonstrated resistance against benzimidazole or moxidectin in 4 of 5 goat herds. In the present case study we describe anthelmintic resistance in a large organic dairy herd established in 2007 after purchasing of goats and sheep from a number of other herds. The herd had a history of recurrent parasitological problems, and in the present grazing season the mortality of kids and lambs exceeded 25%. The herd comprised a total of 698 goats including 240 dairy goats (Saanen and Danish Landrace) in addition to 400 dairy sheep (East Friesian Milk Sheep). Goats and sheep grazed separately but shared common areas. All non-lactating animals were treated with moxidectin approximately 1 month prior to the initial farm visit 5th October 2011. Furthermore, fenbendazole had been used at the farm. Initial mean egg counts were: 1979 eggs per g (EPG) in adult dairy goats, 4694 EPG in kids, 21 EPG in adult dairy sheep, and 3937 EPG in lambs. In the young animals unthriftiness, depression, anaemia and diarrhoea were widespread. Kids ($n = 6 \times 8$) and lambs ($n = 6 \times 8$) from this group were selected for faecal egg count reduction test using registered label dose rates of fenbendazole p.o., ivermectin s.c., moxidectin p.o., closantel p.o. and levamisole for lambs, whereas 1.5 x sheep dose of moxidectin and 2 x sheep dose of fenbendazole/levamisole were administered to kids. The relative numbers of *Haemonchus contortus* in all individual faecal samples were determined by peanut agglutinin staining, and larval cultures of pre- and post-treatment samples were performed. Faecal control samples were taken 14 days post treatment, and the results presented here.